

CLAIMS

- 1 A hyperbaric capsule wherein:
an elongate base molding forms a forward-facing chair for a user, the chair
having a seat and a back rising from the seat,
5 said base molding has a front portion that extends forward of the chair seat
at user foot level,
said base molding has a rear portion that extends upwardly above the back
of the chair and above user head level,
said base molding defines a peripheral seal-line that extends around said
10 front portion, along each side of the chair and around said rear portion,
an elongate canopy extends forward and downward from above user head
level at said back portion of the base to said front portion of the base,
an elongate transparent window is formed in said canopy,
the canopy is moveable between an open position, where a user can freely
15 move to the chair from the side of the capsule, and a closed position where a
seated user is fully enclosed by the base and the canopy, and
said canopy defines a peripheral seal-line that is adapted to engage with
said base seal-line to form an air-tight seal between the canopy and the base
when the canopy is in the closed position.
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- 2 A hyperbaric capsule according to claim 1 wherein:
said canopy has a convex external surface that is curved both front-to-back
and side-to-side,
said window also has a convex outer external surface that is curved both
25 front-to-back and side-to-side, and
said window extends at least from user head level to the level of the seat of
the chair, when the canopy is closed.
- 3 A hyperbaric capsule according to claim 1 or 2, having:
30 latching means operable from both within and outside the capsule for
securing the canopy to the base when the canopy is in the closed position to
permit pressurization of the capsule, and for releasing the canopy from the base
for movement to the open position.

4 A hyperbaric capsule according to claim 3 wherein said latching means includes:

a plurality of latches spaced around said peripheral seal-line of the base,
a plurality of latch pins spaced around said peripheral seal-line of the
5 canopy for engagement by respective ones of said latches,
inside actuator means operable from inside the capsule when the canopy is
in the closed position to secure and release all said latches in unison, and
outside actuator means operable from outside the capsule when the
canopy is in the closed position to secure and release all said latches in unison.

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5 A hyperbaric capsule according to claim 4 wherein:

said latches include hook members moveable between a secure position in
which said hook members engage respective ones of said latch pins when the
canopy is in the closed position and a release position in which said members
15 disengage said respective ones of said latch pins, and

said hook members have an over-center action whereby an opening force
applied to the canopy, when said hook members are in said secure position, acts
to bias said hook members toward the secure position, thereby inhibiting
operation of said inside and outside actuator means when the capsule is under
20 pressure.

6 A hyperbaric capsule according to claim 5 wherein:

the base has a first U-shape periphery which is generally horizontal and
which defines a first portion of said base seal-line,

25 said first U-shape periphery extends from below the seat on each side of
the chair and around said front portion of the base,

the base has a second U-shape periphery which is generally vertical and
which defines a second portion of said base seal-line,

said second U-shape periphery is in the form of an inverted U that extends
30 from below the seat on each side of the chair and over the back of the chair,

said first U-shape periphery and said second U-shape periphery join at a
given angle below the seat, completing said base seal-line,

the canopy includes two opposed downwardly extending side portions of
generally triangular form,

each side portion of the canopy forms a canopy angle that is substantially equal to said given angle, each side portion also defining portion of said canopy seal-line, and

5 the side portions of the canopy fit into said join of the first and second U-shape peripheries on each side of the capsule when the canopy is in the closed position.

7 A hyperbaric capsule according to claim 6 wherein:
said hook members are located externally of the base on each side thereof
10 near the chair and near said join,
respective ones of said latch pins are located on and externally of said side portions of the canopy and are arranged for engagement by said externally located hook members.

15 8 A hyperbaric capsule according to claim 7 wherein:
said externally located hook members are arranged in opposed pairs,
the hook members of each of said pairs are fixed to respective ends of a common substantially horizontal shaft that extends transversely through the base molding, the hook members of each pair being movable by rotation of their
20 respective shaft to engage and release their respective latch pins on the side portions of the canopy,
outward movement of the side portions of the canopy under pressure is resisted by abutment of the side portions with the hook members of a pair and tension within their respective shaft.

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9 A hyperbaric capsule according to any one of claims 6 – 8, wherein,
the canopy is hingedly attached to the base so that, when the canopy is in the closed position, at least part of the side portions of the canopy lies inwards of said first and second U-shaped peripheries of the base on each side of the
30 capsule, whereby outward movement of said side portions of the canopy under pressure is resisted by said first and second U-shaped peripheries of the base.

10 A hyperbaric capsule according to any preceding claim wherein:

the canopy is hingedly attached to the front portion of the base for movement about a transverse horizontal axis, and

gas struts are fitted between the canopy and the base on each side of the front portion of the base to counterbalance the weight of the canopy when open or
5 when being opened.

11 A hyperbaric capsule according to any preceding claim wherein:
a pressure-operated lock is provided to prevent the opening of the canopy while there is super-atmospheric pressure within the capsule.

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12 A hyperbaric capsule according to any preceding claim having:
means adapted to supply cooled air under pressure to the interior of the capsule, and
control means within the capsule adapted to indicate and/or regulate the
15 temperature of the air supplied to the capsule.

13 A hyperbaric capsule according to any preceding claim having:
means adapted to monitor the CO₂ concentration of air within the capsule, and
20 alarm means connected to said monitoring means adapted to signal the user when a predetermined concentration of CO₂ is reached.

14 A hyperbaric capsule according to claim 13 having:
emergency release means operable to effect automatic depressurization of
25 the capsule and release of said latching means when said predetermined concentration of CO₂ is reached.

15 A hyperbaric chamber according to any preceding claim having:
oxygen supply means adapted to supply oxygen gas at hyperbaric
30 pressure to a user within the capsule, said oxygen supply means including a face mask by which oxygen enriched air can supplied to a user seated and enclosed within the capsule.

16 A hyperbaric chamber according to any preceding claim, wherein:

the width of the capsule is less than that of a standard door frame, and the base is fitted with wheels or rollers by which the capsule can be moved to or transported within a domestic location.

- 5 17 A hyperbaric capsule including:
 a base molding that includes an integrally molded chair for a user,
 a removable canopy adapted to fit over a user seated on the chair and to fit
on the base around the chair and the user in a substantially air-tight manner, thus
forming a chamber housing the seated user,
10 latching means operable from both within and outside the capsule for
securing the canopy to the base at a plurality of points about its periphery, and
 air supply means for supplying air under pressure to
 the chamber to generate hyperbaric pressure therein.